Appl. No. 10/735,155
Amdt. sent May 11, 2006
Reply to Office Action of January 17, 2006

PATENT

REMARKS/ARGUMENTS

Claims 1-20 are rejected.

Claims 7 and 18 were objected to for spelling errors, "th".

Claims 1, 18, and 20 are rejected under 35 U.S.C. § 112, second paragraph.

Claims 1, 2, 4-6, 8, 9, 12, and 14-20 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Yamamoto et al, U.S. Patent Publication No. 2002/0144076 A1, in further view of McBreaty et al., U.S. Patent No. 6,526,492 B1.

It is noted with appreciation that claims 3, 7, 10, 11, and 13 are deemed allowable if rewritten in independent form.

As to claims 7 and 18, a review of these claims did not reveal the spelling errors. The examiner is invited to make an examiner's amendment to correct any such errors.

As to the Section 112 rejections, the claims have been amended to more clearly distinguish over the cited art. As a consequence of the clarifying amendments, the Section 112 objections have been addressed. The Section 112 rejections are believed to be overcome.

As to the allowable dependent claims 3, 7, 10, 11, and 13, Applicant has amended the independent claims and as discussed below believe the independent claims are patentably distinct over the cited art. Claims 3, 7, 10, 11, and 13 therefore have not been rewritten in independent form in this response.

Claim 1 recites in part virtualization apparatuses in communication with host computers and receiving I/O requests from the host computers. Claim 6 recites "virtualization apparatuses .. to process input-output requests sent from a plurality of host processors." See also independent claims 9, 15, 18, and 20. In contrast, Yamamoto shows an LVM (142) that is an integral part of a host computer 100. Yamamoto's LVM does not perform I/O processing, and certainly does not receive I/O requests from a plurality of host computers. McBrearty does not show a logical volume, but does mention a logical volume manager is installed in a primary machine. *Col. 4, lines 50-58 and Abstract.* Neither reference individually teaches or in combination suggests the recited virtualization apparatus in communication with host computers and receiving I/O requests from the host computers.

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Claim 1 further recites in part "issuing, to the plurality of virtualization apparatuses, a request for completing all input-output requests received from the host processors that are being processed by the virtualization apparatuses." See also claims 6, 9, 15, and 20. As discussed above, Yamamoto's LVM 142 (Fig. 1) does not perform I/O processing. Therefore, Yamaoto's LVM does not receive a request for completing all input-output requests being processed. Since McBrearty does not show an LVM, that reference does not disclose an LVM receiving a request for completing all input-output requests being processed. Neither reference individually teaches or in combination suggests the recited "issuing, to the plurality of virtualization apparatuses, a request for completing all input-output requests received from the host processors that are being processed by the virtualization apparatuses."

Claim 1 further recites in part "temporarily holding any subsequent input-output requests received from the host processors." See also claims 6, 9, 15, 18, and 20. Since Yamamoto's LVM 142 does not perform I/O processing, Yamaoto's LVM does not receive any I/O requests that temporarily held. Moreover, Yamamoto's LVM certainly does not receive I/O requests <u>from a plurality of host processors</u>. Since McBrearty does not discuss the details of its LVM, that reference does not disclose an LVM that temporarily holds subsequently received I/O requests. Neither reference individually teaches or in combination suggests the recited "temporarily holding any subsequent input-output requests received from the host processors."

Claim 1 further recites in part "receiving, from the plurality of virtualization apparatuses, a completion report of the input-output requests being processed by the virtualization apparatuses." See also claims 6, 9, 15, and 20. Since Yamamoto's LVM 142 does not perform I/O processing, Yamamoto's LVM does not receive a request for completing pending I/O requests and thus does not send a completion report. Since McBrearty does not discuss the details of its LVM, that reference does not disclose an LVM sending a completion report. Neither reference individually teaches or in combination suggests the recited "receiving, from the plurality of virtualization apparatuses, a completion report of the input-output requests being processed by the virtualization apparatuses."

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Claim 1 further recites in part "sending an instruction ... for releasing the input-output request that are being temporarily held." See also claims 6, 9, 15, 18, and 20. As discussed, Yamamoto's LVM 142 does not temporarily hold subsequently received I/O requests. Thus, Yamamoto does not show an LVM that receives temporarily held I/O requests. Since McBrearty does not discuss the details of its LVM, that reference does not disclose an LVM that releases temporarily held I/O requests. Neither reference individually teaches or in combination suggests the recited "sending an instruction ... for releasing the input-output request that are being temporarily held."

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 650-326-2400.

Respectfully submitted,

George B. F. Yee
Reg. No. 37,478

TOWNSEND and TOWNSEND and CREW LLP
Two Embarcadero Center, Eighth Floor
San Francisco, California 94111-3834
Tel: 650-326-2400
Fax: 415-576-0300
GBFY:cmm
60755207 v1